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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 175S1G4

Amplifier Research 175S1G4 Solid State Microwave Amplifier The Amplifier Research 175S1G4 is a solid-state air-cooled broadband amplifier in the S1G4 family providing 175 W CW minimum from 0.8 GHz to 4.2 GHz. OEM family documentation emphasizes Class A linearity, digital control, and remote bus interfaces for wireless and EMC drive. Multi-band wireless subsystem testing and EMC radiated immunity requiring intermediate microwave power through 4.2 GHz. Solid state Class A broadband microwave design The Amplifier Research 175S1G4 is a solid-state air-cooled broadband amplifier in the S1G4 family providing 175 W CW minimum from 0.8 GHz to 4.2 GHz. OEM family documentation emphasizes Class A linearity, digital control, and remote bus interfaces for wireless and EMC drive. Multi-band wireless subsystem testing and EMC radiated immunity requiring intermediate microwave power through 4.2 GHz. Solid state Class A broadband microwave design Digital local and remote amplifier control



MODEL

**Amplifier Research
175S1G4**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

175S1G4

LISTING

<https://aumictechlabs.com/products/175s1g4-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Amplifier Research 175S1G4 is a solid-state broadband microwave amplifier delivering 175 watts minimum RF power across 0.8 GHz to 4.2 GHz instantaneously. Purpose-built for driver amplifier roles in wireless component testing and EMC applications, it combines high gain with low distortion through push-pull circuitry architecture. Technical Specifications Rated Power

Output: 175 W minimum; 190 W at 3 dB compression; 165 W at 1 dB compression Frequency Range: 0.8 GHz to 4.2 GHz (instantaneous bandwidth) Gain: 52.5 dB minimum; continuous adjustment across 15 dB minimum range in 4096 remote steps Input Power: 1.0 mW maximum for rated output Input Impedance: 50 Ω , VSWR 2.0:1 maximum Output Impedance: 50 Ω nominal Third Order Intercept Point (IP3): 61 dBm typical Harmonic Distortion: -20 dBc maximum at 160 W Spurious Signals: -73 dBc typical Phase Linearity: ± 1.0 deg/100 MHz typical Primary Power: 90–132 VAC or 180–264 VAC auto-selected; 50/60 Hz single phase; 1050 W maximum consumption

Key Features Mismatch tolerant: operates without damage or oscillation at 100% rated power under any load impedance magnitude and phase Automatic Level Control (ALC) with front panel threshold adjustment and RF output protection Faithful reproduction of AM, FM, and pulse modulation envelopes Air-cooled, self-contained design in portable form factor Digital Control Panel with local and remote operation via IEEE-488 interface Real-time forward and reflected power display with status reporting

Typical Applications Driver amplifier stage for wireless and communication component testing EMC and radiated immunity testing requiring undistorted modulation fidelity Broadband RF source for subsystem characterization across L-, S-, and C-band frequencies

Compatibility & Integration IEEE-488 remote interface supports integration into automated test systems. Menu-driven softkey control with rotary encoder adjustment enables rapid gain reconfiguration across the 15 dB adjustment range.

175S1G4 Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	175 watts minimum
Frequency Response	0.8 to 4.2 GHz instantaneously
Gain At Maximum Setting Class	52 dB minimum class
Input For Rated Output Class	1.0 milliwatt maximum
Flatness Maximum Class	plus or minus 2.0 dB
Input Impedance Class	50 ohms VSWR 2.0:1 maximum
Output Impedance Class	50 ohms nominal
Mismatch Tolerance Class	100 percent of rated power without foldback
Harmonic Distortion Class	minus 20 dBc maximum near rated power
Modulation Capability Class	AM FM pulse faithful reproduction
Remote Interfaces Class	IEEE 488 RS 232 USB Ethernet class
Cooling	Forced air self contained fans
RF Connector Class	TypeNfemale input with high power output options
Form Factor	Portable self contained air cooled cabinet
Series Family	Amplifier Research S1G4 0.8 to 4.2 GHz
Power Class Sibling 100S1G	100 W minimum
Power Class Sibling 250S1G	250 W minimum
Primary Power Class	Universal AC mains multi hundred watt class
Export Classification Class	EAR99 family class
Circuit Topology	Push pull solid state broadband stages
Spurious Typical Class	minus 73 dBc class family
ALC Capability Class	Internal external ALC path class

175S1G4 Specifications

PARAMETER	VALUE
Applications	Multi-band wireless subsystem testing and EMC radiated immunity requiring intermediate microwave power through 4.2 GHz.
Key Features	Solid state Class A broadband microwave design
Technical Specifications	Rated Output Power: 175 watts minimum

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes	
Rated power and frequency from Amplifier Research 175S1G4 OEM/rental S1G4 family documentation. Confirm gain, compression, and enclosure mass on the unit-specific datasheet.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.